

AMENDMENTS

In the Claims:

Please cancel claims 22-28 and 31 without prejudice or disclaimer. Applicant reserves the right to prosecute such claims in further applications.

Please amend claims 1, 6, 8, 9, 12, 13, 15, 16, 18, 20, and 21 as follows (for the convenience of the Examiner, the unamended claims are also reproduced below):

1. (Amended) A method to increase the processivity of a RNA-dependent DNA polymerase comprising adding an effective amount of a general RNA binding protein to a nucleic acid polymerization mixture comprising said polymerase, whereby addition of said RNA binding protein enables an increase of the processivity of said polymerase.

2. The method of claim 1, wherein said polymerase is a reverse transcriptase.

3. The method of claim 2, wherein said reverse transcriptase is MMLV RT or AMV RT.

4. The method of claim 1, wherein said RNA binding protein is a retroviral nucleocapsid protein.

5. The method of claim 4, wherein said general RNA binding protein is NCp7.

6. (Amended) An improved method of cDNA synthesis, the improvement consisting in adding a general RNA binding protein to a nucleic acid polymerization mixture comprising a reverse transcriptase, whereby addition of said RNA binding protein enables an increase of the processivity of said reverse transcriptase, thereby enabling an increase in the production of full length cDNAs.

7. The improved method of claim 6, wherein said reverse transcriptase is MMLV RT or AMV RT.

8. (Twice Amended) The improved method of claim 6, wherein said RNA binding protein is a retroviral nucleocapsid protein.

9. (Amended) The method of claim 8, wherein said general RNA binding protein is NCp7.

12. (Amended) A method to identify agents which can increase the processivity of a RNA-dependent polymerase, comprising:

a) reverse transcribing a RNA having a polymerase processivity inhibiting structure in the presence of a candidate processivity increasing agent; and

b) comparing the length of the polymerized products;

wherein a potential processivity increasing agent is identified when the length of polymerized products is measurably higher in the presence of the candidate agent than in the absence thereof.

13. (Amended) The method of claim 12, wherein said RNA comprises the sequence 5'-GTAAAAACCCGCTTCGGCGGGTTTTTGCAGAGATCCCCCTCTTCGGAGGGGGA-3' or 5'-CCAGGCCCGGAAGGCCCGGAGTAATCCGGGCCTTCGGGCCTGGCCCCCCCC-3'.

14. The method of claim 12, wherein said polymerase is MMTV RT or AMV RT.

15. (Amended) A method of selecting an agent which is capable of increasing the processivity of a RNA-dependent polymerase, comprising:

a) incubating a candidate polymerase processivity increasing agent together with a polymerization mixture comprising a template RNA and an RNA-dependent polymerase; and

b) comparing the length of the polymerized products;

wherein a potential processivity increasing agent is selected when the length of polymerized products is measurably higher in the presence of the candidate agent than in the absence thereof.

16. (Amended) The method of claim 15, wherein said RNA comprises the sequence 5'-GTAAAAACCCGCTTCGGCGGGTTTTTGCAGAGATCCCCCTCTTCGGAGGGGGA-3' or 5'-CCAGGCCCGGAAGGCCCGGAGTAATCCGGGCCTTCGGGCCTGGCCCCCCCC-3'.

17. The method of claim 15, wherein said polymerase is MMTV RT or AMV RT.

18. (Amended) A polymerization processivity-increasing composition, comprising a template RNA, a RNA-dependent polymerase and a general RNA binding protein, together with a suitable polymerization buffer.

19. The composition of claim 18, wherein said polymerase is a reverse transcriptase.

20. (Amended) The composition of claim 18, wherein said RNA binding protein is chaperone protein NCp7.

21. (Amended) A method to increase the processivity of a RNA-dependent RNA polymerase comprising adding an effective amount of a general RNA binding protein to a nucleic acid polymerization mixture comprising said RNA-dependent RNA polymerase, whereby addition of said general RNA binding protein enables an increase of the processivity of said polymerase.